

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A method of fabricating a semiconductor device ~~comprising having~~ a semiconductor substrate including semiconductor elements, and multi-layered wiring regions, ~~wherein and~~ at least one layer of the wiring regions above ~~the a~~ first wiring region on the semiconductor substrate is fabricated using a process, comprising: ~~the following steps (a) to (f):~~
 - ~~_____ (a) _____ a step of forming a via-hole in an interlayer dielectric formed above the first wiring region on a semiconductor substrate;~~
 - ~~_____ (b) _____ a degassing step for removing gaseous components included within said interlayer dielectric by a heat treatment under reduced pressure and at ~~the a~~ substrate temperature of 300°C to 550°C;~~
 - ~~_____ (c) _____ a step of forming a wetting layer on ~~the a~~ surface of said interlayer dielectric;~~
 - ~~_____ (d) _____ a step of cooling the substrate to a temperature of no more than 100°C;~~
 - ~~_____ (e) _____ a step of forming a first aluminum layer comprising one of aluminum and an alloy in which aluminum is the main component on said wetting layer at a temperature of a first degree C;~~
 - ~~_____ (f) _____ a step of forming a second aluminum layer comprising one of aluminum and an alloy in which aluminum is the main component on said first aluminum layer at a temperature of a second degree C; and ~~wherein~~ the first degree C is lower than the second degree C.~~
2. (Currently Amended) A method of fabricating a semiconductor device ~~comprising having~~ a semiconductor substrate including semiconductor ~~elements; elements,~~

and multi-layered wiring regions, ~~wherein~~ and at least one layer of ~~the~~ a wiring regions above the first wiring region on the semiconductor substrate is fabricated using a process, comprising: ~~the following steps (a) to (f):~~

~~_____ (a) _____ a step of forming an interlayer dielectric formed above the first wiring region on a semiconductor substrate;~~

~~_____ (b) _____ a degassing step for removing gaseous components included within said interlayer dielectric by a heat treatment under reduced pressure and at ~~the~~ a substrate temperature of 300°C to 550°C;~~

~~_____ (c) _____ a step of forming a wetting layer on ~~the~~ a surface of said interlayer dielectric;~~

~~_____ (d) _____ a step of cooling the substrate to a temperature of no more than 100°C;~~

~~_____ (e) _____ a step of forming a first aluminum layer comprising one of aluminum and an alloy in which aluminum is the main component on said wetting layer at a temperature of a first degree C; and~~

~~_____ (f) _____ a step of forming a second aluminum layer comprising one of aluminum and an alloy in which aluminum is the main component on said first aluminum layer at a temperature of a second degree C; and ~~wherein~~ the first degree C is lower than the second degree C.~~

3. (Original) The method of fabricating a semiconductor device according to claim 1, wherein the first degree C is no more than 200°C and the second degree C is at least 300°C.

4. (Original) The method of fabricating a semiconductor device according to claim 2, wherein the first degree C is no more than 200°C and the second degree C is at least 300°C.

5. (Currently Amended) The method of fabricating a semiconductor device according to claim 3, wherein ~~the formation of~~ forming the aluminum layers ~~in said steps (e) and (f)~~ is provided by a sputtering method.

6. (Currently Amended) The method of fabricating a semiconductor device according to claim 3, wherein ~~the formation of~~ forming the aluminum layers ~~in said steps (e) and (f)~~ is provided in the same chamber and in a consecutive manner.

7. (Currently Amended) The method of fabricating a semiconductor device according to claim 3, wherein ~~said steps (d), (e), and (f)~~ cooling the substrate, forming the first aluminum layer, and forming the second aluminum layer, are performed consecutively in the same equipment having a plurality of chambers each maintained under a reduced pressure.

8. (Currently Amended) The method of fabricating a semiconductor device according to claim 3, wherein ~~the formation of~~ forming the aluminum layers ~~in said steps (e) and (f)~~ is provided by controlling the temperature of the stage on which said semiconductor substrate is to be mounted.

9. (New) The method of fabricating a semiconductor device according to claim 1, further comprising:

prior to cooling the substrate, performing heat treatment to the substrate.

10. (New) The method of fabricating a semiconductor device according to claim 2, further comprising:

prior to cooling the substrate, performing heat treatment to the substrate.

11. (New) The method of fabricating a semiconductor device according to claim 1, wherein the via-hole has a bottom, side walls, and top portions; and

wherein the wetting layer has a thickness at the bottom of the via-hole greater than a thickness at the side walls and top portions of the via-hole.